

## **REMARKS**

Applicant respectfully requests reconsideration and allowance of all of the claims of the application. The status of the claims is as follows:

- Claims 1, 4-6, 8-11, 13, 15-17, 20-27, 30-41, 44 and 48 are currently pending.
- Claims 1, 8-9, 17, 25, 31, 34-36, 40, and 48 are amended herein.

### **Cited Documents**

The following documents have been applied to reject one or more claims of the Application:

- **Hayball:** Hayball et al., U.S. Patent No. 6,308,174
- **Graupner:** Graupner et al., U.S. Patent No. 7,035,930

### **Claims 1, 4-6, 8-11, 13, 15-17, 20-27, 30-41, 44 and 48 are Non-Obvious Over Hayball in View of Graupner**

Claims 1, 4-6, 8-11, 13, 15-17, 20-27, 30-41, 44 and 48 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Hayball in view of Graupner. Applicant respectfully requests reconsideration in light of the amendments presented herein.

#### **Independent Claim 1**

Applicant submits that amendments to claim 1 render the pending § 103 rejection moot. Applicant submits that the combination of Hayball and Graupner does not teach

or suggest at least the following features of this claim, as amended (with emphasis added):

- the system definition model *including one or more requirements of the system that must be satisfied by an environment of which the system is to be deployed in order for the system to run in the environment.*
- validating the environment, by the one or more computing devices, by *comparing the one or more requirements of the system with the environment of which the system is to be deployed to determine whether the one or more requirements of the system are satisfied by the environment* during at least the design of the system.

Hayball generally pertains to a management information base (MIB) to store “data or information suitable for use in managing a communications network. For example, information about the performance of components in the network; information about faults in the network and information about the configuration of the network.” Column 4, lines 46-50. The MIB of Hayball, however, is limited to topology information. Column 5, lines 13-14. For example, “a MIB identifies information about the configuration of the network that is being managed (i.e. what components there are in the network and how they are connected) and it may also provide information about the performance of the network (e.g. the number of packets that have been transferred between two entities in the network).” Column 4, lines 56-61.

In other words, the MIB of Hayball described the physical layout of a system (i.e., the where the cables and devices are physically located). However, Hayball is silent as

to the MIB “including one or more requirements of the system that must be satisfied by an environment of which the system is to be deployed” as recited in Applicant’s claim 1.

Moreover, since the MIB of Hayball fails to include “one or more requirements of the system that must be satisfied by an environment of which the system is to be deployed”, Applicant further submits that Hayball fails to teach or suggest “comparing the one or more requirements of the system with the environment of which the system is to be deployed to determine whether the one or more requirements of the system are satisfied by the environment” as further recited in Applicant’s claim 1.

To illustrate this difference, consider the following non-limiting example. Suppose that the system is a home communication network and that the system requirements include that the computing device of the home communication network have a minimum downstream data transmission rate of 7 Mbps. Suppose further that the topology of the system includes an IDSL line (i.e., downstream data transmission rate of up to 144 Kbps) running to a DSL router which is connected to a DSL modem which is connected to the home computing device. In Hayball, the MIB will specify the topology only. In other words, the MIB will state that the system includes the IDSL line, the DSL router, the DSL modem, and the home computing device. However, Hayball is silent as to evaluating any specific hardware requirements. Claim 1, on the other hand, will recognize that the environment has a downstream data transmission rate of up to 144 Kbps and will further *compare* this environment specification with the system requirement that the home communication network must have a minimum downstream data transmission rate of 7 Mbps to conclude that the environment does not satisfy the system requirements. Furthermore, claim 1 will recognize this inconsistency, during *the*

*design of the system* such that appropriate measures may be taken before the system is deployed. Hayball, on the other hand, at the earliest will not recognize such issues until after deployment.

In addition, Graupner fails to remedy the deficiencies in Hayball noted above with respect to claim 1. Graupner generally pertains to “deployment of complex software systems in distributed computing environments” (Abstract). Specifically, a “model description describes the elements that are used as input data in simulations for purposes of prediction or evaluation of possible deployment solutions” (Column 4, lines 25-27).

The model description of Graupner, which includes “a topology of constituent components (or ‘nodes’), the parameters to components and links, and the hierarchical relationships between the components” (Column 4, lines 7-10), fails to compare the system design with “the environment of which the system is to be deployed” as recited in Applicant’s claim 1. Rather, the model description evaluates different topology configurations to determine how the various hardware elements of the system fit together without giving consideration as to whether requirements of the hardware are “satisfied by an environment of which the system is to be deployed.” Consequently, Hayball in view of Graupner fails to teach or suggest the cited elements of Applicant’s claim 1.

The Office cited Hayball as teaching or suggesting the validating element of Applicant’s claim 1 as follows: Hayball teaches “validating, by the one or more computing devices, that the constraints are satisfied during at least the design of the system (Col. 7, lines 1 - 13; lines 28 - 42)”. Office action, page 3, lines 8-9. The cited

portion of Hayball pertains to using the future MIBs to test various upgrade configurations. Column 7, lines 1-13. However, Applicant submits that such testing of the upgrade configurations are limited to determining whether the correct hardware is installed rather than considering whether requirements of the hardware are “satisfied by an environment of which the system is to be deployed.”

Consequently, the combination of Hayball and Graupner does not teach or suggest all of the elements and features of claim 1. Accordingly, Applicant respectfully requests that the rejection of claim 1 be withdrawn. Due to Applicant's earnest belief that claim 1, as rejected under Section 103, is allowable for reciting elements which are not taught or suggested in the combination of Hayball and Graupner, Applicant will not address motivation to combine the Hayball and Graupner reference with respect to claim 1 in this response. However, Applicant hereby reserves the right to further challenge the motivation to combine the Hayball and Graupner references.

Applicant has amended claim 1. Support for this amendment may be found at least at, for example, page 11, lines 12-15 of the Specification as originally filed. Thus, no new matter has been added.

*Dependent Claims 4-6, 8-11, 13-16, 44, and 48*

Claims 4-6, 8-11, 13-16, 44, and 48 ultimately depend from independent claim 1. As discussed above, claim 1 is believed allowable over the cited art. Therefore, claims 4-6, 8-11, 13-16, 44, and 48 are also allowable over the combination of Hayball and Graupner at least for their dependency from an allowable base claim. Claims 4-6, 8-11,

13-16, 44, and 48 may also be allowable for the additional features recited by these claims.

For example, claim 8 recites: “A method as recited in claim 1, further comprising validating the system by comparing one or more requirements of the environment with the system to determine whether the one or more requirements of the environment are satisfied by the system during at least the design of the system.”

Applicant submits that Hayball in view of Graupner fails to teach or suggest the elements of claim 8. Both Hayball and Graupner are concerned with system topography which pertain to the physical layout of a system (i.e., the where the cables and devices are physically located). Both Hayball and Graupner are silent as to considering the environment of which a system is to be deployed. Accordingly, Hayball in view of Graupner fails to teach or suggest “comparing one or more *requirements of the environment* with the system” as recited in Applicant’s claim 8. (Emphasis added).

### Independent Claim 17

Applicant submits that amendments to claim 17 render the pending § 103 rejection moot. Applicant submits that the combination of Hayball and Graupner does not teach or suggest at least the following features of this claim, as amended (with emphasis added):

- determine that the environment in which the application is to be deployed satisfies the constraints on the configuration of their applications *prior to deploying the system*.

Applicant submits that Hayball in view of Graupner fails to teach or suggest the elements of claim 17 because the cited art fails to determine whether the environment satisfies the “constraints on the configuration of their applications *prior to deploying the system.*” (Emphasis added). Hayball teaches the MIB which contains “a model of the current communications network.” Column 5, lines 58-59. For example, the “MIB identifies information about the configuration of the network that is being managed (i.e. what components there are in the network and how they are connected).” Column 4, lines 56-61. Moreover, Hayball discusses a future MIB that can be used to perform upgrades. Specifically, Hayball discusses: “[e]quipment is installed 35 and this is automatically detected by the network management system 36 and current MIB 32. The new installation is verified 37 against the appropriate future MIB 31 and the upgrade continues.” Column 7, lines 53-57.

As exemplified in the above passage, Hayball first installs the new equipment and then verifies the installation. In other words, Hayball verifies the system after installing it rather than “determin[ing] that the environment in which the application is to be deployed satisfies the constraints on the configuration of their applications *prior to deploying the system*” as recited in Applicant’s claim 17.

Moreover, Graupner fails to remedy the deficiencies in Hayball noted above with respect to claim 17 as Graupner is silent with respect to the above recited element of claim 17. Consequently, the combination of Hayball and Graupner does not teach or suggest all of the elements and features of claim 17. Accordingly, Applicant respectfully requests that the rejection of claim 17 be withdrawn.

### Dependent Claims 20-24

Claims 20-24 ultimately depend from independent claim 17. As discussed above, claim 17 is believed allowable over the cited art. Therefore, claims 20-24 are also allowable over the combination of Hayball and Graupner at least for their dependency from an allowable base claim. Claims 20-24 may also be allowable for the additional features recited by these claims.

### Independent Claim 25

Applicant submits that amendments to claim 25 render the pending § 103 rejection moot. Applicant submits that the combination of Hayball and Graupner does not teach or suggest at least the following features of this claim, as amended (with emphasis added):

- means operable by the processor for validating the environment by comparing the requirements of the system with the environment to determine whether the requirements of the system are satisfied by the environment during at least the design of the system prior to the using the system definition model to deploy the system.

The Office cites Hayball as allegedly teaching or suggesting the cited portion of Applicant's claim 25. Office Action, page 3, lines 8-9. However, since the MIB of Hayball is limited to topological information (i.e., the physical layout of a system such as where the cables and devices are physically located) (Column 4, lines 56-61), Hayball is agnostic as to any environmental specifics of the system and thus fails to teach or



suggest “determin[ing] whether the requirements of the system are satisfied by the environment” as recited in Applicant’s claim 25. Moreover, Graupner fails to remedy the deficiencies in Hayball noted above with respect to claim 25 as Graupner is silent with respect to the above recited element of claim 25.

Consequently, the combination of Hayball and Graupner does not teach or suggest all of the elements and features of claim 25. Accordingly, Applicant respectfully requests that the rejection of claim 25 be withdrawn.

#### Dependent Claims 26-27 and 30

Claims 26-27 and 30 ultimately depend from independent claim 25. As discussed above, claim 25 is believed allowable over the cited art. Therefore, claims 26-27 and 30 are also allowable over the combination of Hayball and Graupner at least for their dependency from an allowable base claim. Claims 26-27 and 30 may also be allowable for the additional features recited by these claims.

#### Independent Claim 31

Applicant submits that amendments to claim 31 render the pending § 103 rejection moot. Applicant submits that the combination of Hayball and Graupner does not teach or suggest at least the following features of this claim, as amended (with emphasis added):

- the system definition model including *requirements of the application that must be satisfied by the environment* in order for the application to run in the environment.

The “requirements of the application” aspect of claim 31 was not previously recited by any claim; accordingly, the Office has not cited any prior art as allegedly teaching or suggesting this aspect. Applicant notes that the combination of Hayball and Graupner is silent on any teachings or suggestions of “the system definition model including requirements of the application that must be satisfied by the environment” as applied to the recitations of Applicant's claim 31.

Hayball generally discusses a MIB that is limited to topological information (i.e., the physical layout of a system such as where the cables and devices are physically located). Column 4, lines 56-61. As such, Hayball is silent as to the MIB including any information pertaining to the environment of which the system is to be deployed. Accordingly, Hayball fails to teach or suggest “the system definition model including requirements of the application that must be satisfied by the environment” as applied to the recitations of Applicant's claim 31. Moreover, Graupner fails to remedy the deficiencies of Hayball.

Consequently, the combination of Hayball and Graupner does not teach or suggest all of the elements and features of claim 31. Accordingly, Applicant respectfully requests that the rejection of claim 31 be withdrawn.

### *Dependent Claims 32-41*

Claims 32-41 ultimately depend from independent claim 31. As discussed above, claim 31 is believed allowable over the cited art. Therefore, claims 32-41 are also allowable over the combination of Hayball and Graupner at least for their

dependency from an allowable base claim. Claims 32-41 may also be allowable for the additional features recited by these claims.

## **Conclusion**

If any issues remain that would prevent allowance of this application, Applicant requests that the Examiner contact the undersigned representative before issuing a subsequent Action.

Respectfully Submitted,

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Dated: 16 December 2010

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